

Scientific note

***Paxyodon syrmatophorus* (MEUSCHEN, 1781) (Mollusca, Bivalvia, Unionoida) in the Curuá-Una reservoir, Santarém, Pará, Brazil**

by

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(Accepted for publication: October 1997).

The Curuá-Una hydroelectric power plant which dams the river of the same name was the first to be constructed in the Amazon Basin. The project of this plant was not based on a study on environmental impact which was not required at the time. Therefore, no survey on the biota of the river was performed before the construction or even on the occasion of the closing of the sluice-gates for the formation of the lake whose filling was completed on April 30, 1977. The first limnological and biological investigations of this lake were conducted on April and May 1978 when the need arose to control macrophytes which had occupied extensive areas of the lake. The study performed by JUNK, ROBERTSON, DARWICH & VIEIRA (1981) included hydrochemical conditions, macrophytes, zooplankton cladocerans and a rich ichthyofauna. The benthos was not investigated. While looking for poriferans in the Curuá-Una lake from October 9 to 16, 1991 (VOLKMER-RIBEIRO & LOPES DE CARVALHO, 1992), we were told by local inhabitants, who used to fish underwater in the lake, that bivalve mollusks commonly occurred on the lake shores. We found 16 specimens which were identified as *Paxyodon syrmatophorus* (MEUSCHEN, 1781) and deposited in the scientific collection of the Museu de Ciências Naturais da Fundação Zoobotânica do Rio Grande do Sul, under the number MCN 32917 (Figs. 1 and 2).

These mollusks occupied the entire sandy marginal zone of the lake at a depth of about 3 m. Therefore, the animals were inside the oxygen layer of the lake which, on

*CNPq fellowships nr. 305365/76 and 306134/76

the occasion of the collection, presented a stratification of oxygen with anoxia starting from 8 m (the maximum depth, localized close to the dam, is about 18 m). This species seems to be the only mollusk of the Unionoida group occupying the benthos of the lake. The Curuá-Una river is a tributary of the right margin of the Amazon river, immediately below the city of Santarém.

The known distribution of *Paxyodon syrmatophorus* was limited to the lower course of the Amazon river where it is common, but the species has been also reported to occur in Guyana (BONETTO, 1967). The species belongs to Prisodontini which comprises a group of species possessing wing-like projections on the extremities of the dorsal line, a remarkable development of the hinge and, especially, of strong teeth with an elongated shape both in the anterior and posterior region of the umbos and the tendency to form denticles or vertical striae. The glochidium larva is a fish parasite type with a subtriangle contour and teeth distally divided into cuspids or tapered spinules (BONETTO, 1960, 1967). The species lacks an umbonal sculpture, and presents a clear posterior ridge, a high and relatively straight posterior edge perpendicular to the hinge, a bright brown periostracum (Fig. 1) and a nacre ranging in color from silver-blue to rose-salmon.

The collected specimens did not present valves as thick or a hinge as strong as the material found in the Rio Araguaia (MCN 2727) and Rio Tocantins, Baião (Zoologische Sammlung des Bayrischen Staates, Munich, col. MODEL, without number). They are identical in shape, contour, width and thickness of the valves and the more fragile and thin conformation of the hinge and teeth (Fig. 2) to the specimens of the Rio Tapajós collected in Alter do Chão (MCN 31692), Ponta Cururu (ZSM col. FITTKAU, without number) and Santarém (ZSM-col. MODEL 1173).

The occurrence of *Paxyodon syrmatophorus* in a lake depends on the association with one or maybe more species of fish on which the glochidia develop along approximately one month period. Until now no research was done to discover which are the fish species involved in this association. Such an study would certainly contribute to the understanding of the occupation of the Curuá-Una Reservoir by the bivalve. The animal has a slow and vertical locomotion that usually depends on the ascending and descending water level.

The presence of wing-like projections or other ornaments on the mollusk shell is generally associated with the type of sand substrate and running water, conferring a higher stability and orientation on the animal. It is assumed that *P. syrmatophorus* has projections appropriate for the sandy shores of running water. Specimens of the related species *Triplodon corrugatus* (LAMARCK, 1819), with shape similar to that of *Paxyodon*, were collected along the bank of the Rio Branco at a depth of 2 m in an area with a strong current (MANSUR & VALER, 1992). The abundance of *P. syrmatophorus* in dammed water is a new finding.

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Figs. 1 & 2:
 Shell of *Paxyodon syrmatophorus* (MEUSCHEN, 1781).
 1: external view of the left valve. 2: internal view of the right valve. Scale = 1 cm.